[redacted]

DEPARTMENT OF ECONOMICS
WASHINGTON UNIVERSITY
ST. LOUIS, MISSOURI

PROSPECTS FOR THE AMERICAN ECONOMY DURING THE POST-VIETNAM PERIOD

By Murray L. Weidenbaum
Professor of Economics
Washington University

NASA Economic Research Program
Working Paper 6709
July 1967

This research was supported in part by National Aeronautics and Space Administration Grant NsG-342 to Washington University.

Preface

The work underlying this study originally was undertaken under the auspices of the Joint Economic Committee. This version was prepared in the belief that the data on and analysis of the long-term prospects for the American economy would be helpful to policy-makers concerned with future developments in the national space program. The study indicates the substantial amount of public resources and revenues which are likely to be available in the years following the termination of hostilities in Vietnam.

MURRAY L. WEIDENBAUM
Director, NASA Economic Research Program
Washington University

I. INTRODUCTION

The purpose of this report is to sketch out some of the major types of options which are available to economic policy makers in the United States during the coming decade. The intention is not to recommend what the decisions should be, but to provide some of the analytical background helpful to those who will participate in or influence such decisions.

As a starting point, a set of long-range economic projections prepared by the Department of Commerce was utilized to indicate the possible magnitude of economic growth.[1] These estimates are not presented here as gospel, but as a carefully prepared set of long-term economic projections issued by a reputable organization with very considerable capability in these matters.

There are numerous other long-term economic projections issued by research, business, and academic organizations and institutions. Some of these are less detailed and do not lend themselves to systematic analysis; the differences in projected magnitudes vary from slight to substantial. Nevertheless, the Commerce projections are considered to be fairly representative, both as to methodology used and estimates arrived at. Appendix A compares the Commerce projections with those of the National Planning Association.

As Knorr and Morgenstern have reminded us recently, "At no time is the future completely foredained."[2] They go on to point out that, hence, the future cannot be known in advance and, on the contrary, is subject to some extent to manipulation by both individuals and governments.

---

[1]For details and alternate projections, see U.S. Congress, Joint Economic Committee, U.S. Economic Growth to 1975: Potentials and Problems, Washington, U.S. Government Printing Office, 1966.

[2]Klaus Knorr and Oskar Morgenstern, "Conjecturing about our Military and Political Future," University, Fall 1965, p. 30.

Economic projections, particularly, cannot be "accurate" in the sense that they precisely predict the environment of the future. Such estimates can only be approximate. Our tools for economic analysis are not so precise and our foresight is not so sure. Projections such as those utilized here should not be called forecasts or predictions because their very existence, indeed the very fact that they are being made, or other autonomous events, may put into motion forces which lead to changes in the very assumptions on which these projections are based. A major purpose of the present analysis is to set forth the nature of the adjustments that appear needed to achieve certain objectives and to suggest the implications for the economy if the adjustments are not forthcoming.

Persons and organizations experienced in making and using economic projections maintain that these limitations do not invalidate the potential utility of such estimates. The organized way of thinking about the future is itself of value; the estimates, especially when understood to illustrate only the general orders of magnitudes of trends which appear probable under certain assumptions, can be of specific operational usefulness.

The flexibility inherent in the American economy obviously affects any analysis of its future development. Certainly, the economic potential in a future period is not a concept that can be based on one definite set of figures. For example, more or less people can be drawn into the labor force; longer or shorter hours can be worked; new methods of production and new products can be adopted at a faster or slower rate; and government policies can be designed to support a higher or lower rate of economic growth.[3]

---

[3] Cf. Gerhard Colm, The American Economy in 1970, Washington, D.C., National Planning Association, October 1959.

II. SUMMARY OF THE COMMERCE DEPARTMENT PROJECTIONS

It may be helpful to summarize the key points of the Commerce projections. The methodology employed is standard for long-term economic projections.[4] Essentially, the national income and product accounts are utilized as a framework. The supply of potential economic output is arrived at by estimating (1) the labor force that would be gainfully employed under the assumed conditions (the assumptions are discussed below), (2) the hours worked, and (3) the output per man-hour or productivity. This approach takes account of population trends, manpower availability, unemployment rates, changes in the standard workweek, the rising productivity of the American economy, trends in overall price levels, and similar factors that influence the total amount of goods and services that can be produced by an economy during a given period in time.

In addition, estimates are then developed of the possible demands for this level of output by consumers, business firms, and governmental units at each level. These separate but related estimates of the supply of and demand for GNP also serve as a good check of the internal consistency of the projections. They help to answer the question, "What combination of public and private demands would require the potential supply of goods and services?"

Key Assumptions

As stated at the outset, these projections of the American economy show the results likely under specified and assumed conditions. Hence, knowing what the key assumptions are is critical to understanding and properly using such data. To cite an extreme case, a projection showing estimates of GNP under an assumed disarmament program for 1975 is not just another economic prognostication

---

[4] Cf. M.L. Weidenbaum, "The Role of Economics in Business Planning," in Max D. Richards and William A. Nielander, editors, Readings in Management, Second Edition, Cincinnati, South-Western Publishing Co., 1963.

for the coming decade. Rather, it is a specialized projection under an assumed and obviously hypothetical situation. The Department of Commerce projections used here assume a 4 percent average annual growth for real Gross National Product during the 1966-75 time period. Other assumptions are shown below:

1. The war in Vietnam will be settled before the end of 1967.

2. The total labor force will rise from 78.4 million in 1965 to 93.6 million in 1975.

3. The armed forces will decline to 2.6 million in 1975, from the current level of 3.1 million.

4. Hence, the civilian labor force will rise from 75.6 million in 1965 to 91.0 million in 1975.

5. Average weekly hours worked will decline by one-half hour between 1967 and 1970 and by an additional one-half hour between 1970 and 1975. Specific assumptions in ratio form are shown below.

Category	Specific Assumptions
Average annual change in real output	4.0%
Implicit annual price deflator for GNP	1.5%
Average annual Unemployment rate	4.0%
Average annual increase in productivity by 1975 (GNP per man-hour)	2.5%
Average increase in private productivity in 1975 (private GNP per man-hour)	2.9%
Personal ratio of personal saving to personal income	5.5%

Potential Supply of Gross National Product

Three major factors determine the potential supply of GNP: the total number of people working during a given period, the total number of hours they work, and their average output per man-hour.

Table 1 shows the derivation of the estimates of employment in the Commerce projections. These estimates of total employment consist of (1) the number of persons in the armed forces and (2) the proportion of the civilian labor force (defined as total labor force less those in the armed forces) which is gainfully employed. The latter is assumed to be 96 percent. Total employment is projected to rise from 77.1 million in 1966 to 90.0 million in 1975.

A few comparisons may be helpful. The labor force is projected to expand at the average annual rate of 1.8 percent over the coming decade, on the basis of standard Census Bureau population projections and historical rates of the proportion of the total population which is in the labor force -- thus making the normal allowance for the aged, the infirm, full-time students and housewives, and others not available for employment. The 1.8 percent growth rate compares to the actual rate of 1.3 percent a year experienced over the period 1948-1964.

Also, the 4 percent unemployment assumption is below the rates which the American economy has experienced over extended periods of non-wartime in recent years.

Given the assumptions presented above concerning the decline in the average workweek and the rise in output per man-hour estimates can be made of the total potential supply of GNP. The results are contained in Table 2. Expressed in terms of constant 1958 dollars, it can be seen that the potential supply of GNP is estimated to rise from $648 billion in 1966 to $925 billion in 1975. Real GNP is estimated to rise by 4.0 percent a year.

Table 1

DERIVATION OF ESTIMATES OF EMPLOYMENT, 1965-1975

Year	Total Labor Force	Armed Forces (in millions)	Civilian Labor Force	Rate of Unemployment (percent)	Civilian Employment (millions)
1965	78.4	2.7	75.6	4.6	72.2
66	80.0	3.1	76.9	3.8	74.0
67	81.6	3.1	78.5	4.0	75.3
68	83.2	2.7	80.5	4.0	77.1
69	84.8	2.7	82.1	4.0	78.5
1970	86.4	2.7	83.7	4.0	80.0
71	87.9	2.7	85.2	4.0	81.4
72	89.4	2.7	86.7	4.0	82.9
73	90.8	2.6	88.2	4.0	84.5
74	92.2	2.6	89.6	4.0	85.9
75	93.6	2.6	91.0	4.0	87.4

Source: U.S. Department of Commerce. Detailed description of the methodology is contained in U.S. Congress, Joint Economic Committee, U.S. Economic Growth to 1975: Potentials and Problems, Washington, U.S. Government Printing Office, 1966.

Table 2

DERIVATION OF ESTIMATED POTENTIAL SUPPLY OF GNP, 1966-1975

Year	Total Employment (millions)	Hours Worked Per Week (number)	Output Per Man-Hour (dollars)	Potential Supply of GNP (1958 $ billions)
1966	77.1	38.6	4.19	648
67	78.4	38.5	4.29	674
68	79.8	38.4	4.40	701
69	81.2	38.3	4.51	730
1970	82.7	38.2	4.63	760
71	84.1	38.1	4.74	789
72	85.6	38.0	4.85	821
73	87.1	37.9	4.97	853
74	88.5	37.8	5.10	888
75	90.0	37.7	5.24	925

Source: U.S. Department of Commerce

The Potential Demand for Gross National Product

In estimating the demand or expenditure side of GNP, the major components are personal consumption expenditures, private investment, net exports, and government purchases of goods and services. The details of these projections are contained in Table 3; the highlights are discussed below.

Personal consumption expenditures. Total personal consumption expenditures were arrived at by several steps. The first step was to derive estimates of total personal income from the GNP figures. The second step was to deduct direct taxes to determine the amount of disposable personal income. The next step was to estimate the proportion of disposable personal income that individuals would save, the remainder being available for personal outlays.[5] The personal saving rate was assumed at 5.2 percent in 1970 and 5.6 percent in 1975.

Total personal consumer expenditures are estimated to rise from $396 billion in 1965 to $606 billion in 1975. The figures for durable goods were obtained by assuming arbitrarily a relatively high proportion to disposable personal income. Expenditures on nondurable goods were the result of extending the trend of nondurables as a percent of disposable personal income. Services were projected as the residual.

Gross Private Domestic Investment. Nonresidential fixed investment was computed at 9.8 percent of GNP in 1970 and 9.5 percent in 1975, compared to 10.6 percent in 1965. New investment in residential structures was assumed at 4.8 percent of GNP in 1970 and 5.5 percent in 1975. The change in business inventories was estimated arbitrarily -- 0.9 percent of GNP in 1970 and 1.0 percent in 1975.

---

[5]In recent conceptual revisions of the national income and product accounts, private interest payments are no longer included in GNP. Hence, a portion of disposable personal income is allocated to payment of interest.

Table 3

PROJECTIONS OF GROSS NATIONAL PRODUCT

	Actual	Projection	
	1965	1970	1975
	Billions of current dollars		
Gross national product	681.2	920.0	1205.0
Personal consumption expenditures	431.5	583.4	753.9
Durable goods	66.1	87.5	113.5
Nondurable goods	190.6	241.5	292.9
Services	174.8	254.4	347.5
Gross private domestic investment	106.6	137.5	183.5
Nonresidential fixed investment	69.7	85.0	105.5
Residential structures	27.8	44.3	66.0
Change in business inventories	9.1	8.2	12.0
Net exports of goods and services	7.0	9.3	12.1
Exports	39.0	51.0	66.2
Imports	32.0	41.7	54.1
Government purchases of goods and services	136.2	189.8	255.5
Federal	66.8	78.5	93.1
State and local	69.4	111.3	162.4
	Billions of 1958 dollars		
Gross national product	614.4	760.0	925.0
Personal consumption expenditures	396.2	498.3	606.0
Durable goods	66.4	88.0	114.5
Nondurable goods	178.2	211.5	243.0
Services	151.6	198.8	248.5
Gross private domestic investment	97.8	115.5	143.6
Nonresidential fixed investment	64.9	74.5	87.9
Residential structures	24.1	34.2	46.5
Change in business inventories	8.8	6.8	9.2
Net exports of goods and services	6.3	8.0	9.9
Exports	37.3	48.5	61.9
Imports	31.0	40.5	52.0
Government purchases of goods and services	114.1	138.2	165.5
Federal	57.8	60.0	64.5
State and local	56.3	78.2	101.0

Source: U.S. Department of Commerce

Net exports of goods and services. Merchandise exports were computed as a function of GNP abroad and of merchandise imports in previous years.[6] The exports of services were computed from a trend line for the period 1953-65. Merchandise imports were estimated via the relationship with GNP.[7] The imports of services were estimated from the historical relationship with disposable personal income.[8] Military expenditures entering into U.S. foreign trade were assumed at arbitrary amounts.

Government purchases of Goods and Services. The estimates of compensation of Federal employees are assumed to rise with private productivity gains and with the consumer price level. Other government purchases of goods and services were estimated in two steps. Initially, other Federal Government purchases were held constant in real terms and state and local purchases were estimated as a function of national income.[9]

On the basis of current Federal tax rates, the potential revenues of the Federal Government, in the 1970-75 time period, would substantially exceed the Federal expenditures indicated above as well as currently-projected requirements for interest, transfer payments, and other outlay categories. This "potential" surplus would rise to $11.3 billion in 1970 and $34.2 billion in 1975.

As has been pointed out in the literature on public finance, such large potential budgetary surpluses would exert a strong deflationary effect on the

---

[6]Merchandise exports = -2.090 + .198 GNP abroad + .238 merchandise imports in 1953-65 (excluding 1956 and 1957).

[7]Merchandise imports = .158 + .0295 GNP (1948-1965).

[8]Service imports = -2.688 + .0224 DPI (1953-1965).

[9]State and local purchases = -29.30 + .1796 (national income) for 1952-65, except for 1954, 1958, and 1961.

national economy. In fact, they likely would be self-defeating in that they would prevent the attainment of the high levels of economic activity projected here.[10] In practice, it is likely that the potential increases in Federal revenue under existing rates would be devoted to new and larger Federal spending programs and to tax rate reduction, in some proportion. Hence, for illustrative purposes, it was assumed that the bulk of the potential surpluses would be used three ways: (1) increases in Federal purchases of goods and services, (2) increases in Federal transfer payments, and, primarily, (3) substantial increases in Federal grants-in-aid to state and local governments. The arbitrary nature of this hypothetical decision of the potential surpluses indicates the array of possibilities rather than a specific recommendation for policy action. The large potential surpluses would permit choice among the various alternative possibilities for aid to state and local governments discussed in Chapter III.

Table 4 shows the estimated distribution of governmental revenues and expenditures in 1970 and 1975 after the hypothetical distribution of the potential budgetary surplus has been made. Moderate surpluses are estimated in the so-called "national income accounts" budget in 1970 and 1975, on the basis of the assumptions made here. Major reductions in tax rates and/or massive expansions in government spending programs could eliminate the estimated surpluses.

---

[10] Cf. Michael E. Levy, Fiscal Policy, Cycles and Growth, The Conference Board, 1963.

Table 4

GOVERNMENT RECEIPTS AND EXPENDITURES

	Actual	Projection	
	1965	1970	1975
	Billions of dollars		
FEDERAL GOVERNMENT			
Receipts	124.9	175.1	237.4
Personal tax and nontax receipts	54.2	77.3	111.0
Corporate profits tax accruals	29.1	38.7	47.3
Indirect business tax and nontax accruals	16.8	17.2	22.2
Contributions for social insurance	24.8	41.9	56.9
Expenditures	123.4	170.9	224.4
Purchases of goods and services	65.8	78.5	93.1
National defense			
Other			
Transfer payments	32.4	54.6	75.4
To persons	30.3	52.2	72.8
To foreigners (net)	2.2	2.4	2.6
Grants-in-aid to State and local governments	11.2	21.7	37.7
Net interest paid	8.7	11.1	12.6
Subsidies less current surplus of government enterprises	4.2	5.0	5.6
Surplus or deficit (-), national income and product accounts	1.6	4.2	13.0
STATE AND LOCAL GOVERNMENT			
Receipts	75.3	115.2	168.6
Personal tax and nontax receipts	11.8	20.0	32.3
Corporate profits tax accruals	2.0	2.8	3.5
Indirect business tax and nontax accruals	45.8	64.2	86.0
Contributions for social insurance	4.5	6.5	9.1
Federal grants-in-aid	11.2	21.7	37.7
Expenditures	73.7	116.4	168.3
Purchases of goods and services	69.4	111.3	162.4
Transfer payments to persons	6.9	8.7	10.5
Net interest paid	0.6	0.6	0.6
Less: Current surplus of government enterprises	3.2	4.2	5.2
Surplus or deficit (-), national income and product accounts	1.6	-1.2	0.3

Source: U.S. Department of Commerce

III. MAJOR POLICY IMPLICATIONS

Long-term projections of the American economy, such as those contained in this report, point up some of the important emerging questions of public policy in the field of economics. The distinction between longer-term projections (those covering 5 to 10 years or more) and shorter-term projections (covering the next year or two) carries over into any analysis of their policy implications. This study focuses on those longer-term policy implications. Specifically, it is assumed that by the 1970-75 time period, United States military expenditures in Vietnam will be considerably reduced from the present level. Various military and political conditions are consistent with that essentially economic assumption, ranging from an informal cessation of hostilities to the formal signing and execution of an international peace agreement.

In any event, this section of the report does not deal with the important current questions of the economic adjustments to the present defense build-up required to carry out United States commitments in Vietnam. Rather, it deals with the types of problems that are likely to exist in the period thereafter. It is hoped that, given this lead time, significant advance thought and attention can thus be focused on the types of economic problems that are likely to face the Nation in the coming decade.

It should be recognized, however, that important long-term implications may flow from current short-term decisions. For example, the choice of tax increases to finance Vietnam costs would strengthen future revenue capabilities of the Federal Government vis-à-vis future requirements for government spending. Reliance on tighter restraints on nondefense public outlays would serve to add to the backlog of unfilled civilian demands in the public sector which would be present in the post-Vietnam period.

The following is an attempt to show the variety of the questions of long-term economic policy that are likely to arise during the coming decade and to indicate many of the difficult interrelationships; the tabulation by no means is exhaustive:

1. What are the major alternative methods of attaining the economic growth rates projected in this report and what are the implications involved in selecting among these methods?
2. What are likely to be the policy reactions to the rising supply of potential workers as indicated by projections of the labor force age group?
3. How can the projected relatively rapid rates of economic growth be reconciled with the fairly moderate estimates of future increases in the aggregate price level?
4. What are the alternative methods of encouraging additional manpower training and, again, what are the implications involved in selecting among them?
5. What are likely to be the major effects of alternative wage policies?
6. What are likely to be the major choices among alternative tax and other fiscal policies?
7. What are the major economic considerations involved in the changing composition of Federal Government expenditure programs?
8. What are likely to be the major effects of the alternative methods of federal aid to state and local governments?
9. How do the various Great Society programs influence regional income distribution and economic development?
10. What are the alternative means of promoting public and private investment, consumer spending, and a rising standard of living?

Attaining the Projected Economic Growth Rate

As a result of expansionary fiscal policy and other public and private efforts, the overall growth rate of the national economy has been accelerated during the past five years and the unemployment rate has been reduced substantially. However, not until the recent Vietnam military buildup did the rate of unemployment come down to the Council of Economic Advisers' "interim" target of four percent of the civilian labor force.

It has been pointed out, moreover, that the pace of economic expansion during 1962-65 has been considerably above the rate of increase that this Nation has been able to sustain over an extended period in peacetime, at least in the past.[11] It can be inferred from the projections presented earlier that inability during the 1970-75 time period to maintain the current, historically high rate of economic growth would result in a substantial rise in the unemployment rate, assuming other factors do not change significantly.

But, other factors will be changing significantly. The Nation's labor force is projected to grow more rapidly in the next decade than in the past ten years. Productivity (as measured by output per man-hour) is estimated to continue increasing, as a result of the large-scale investments in human and physical resources -- business plant and equipment purchases, research and development, education, training, and so forth.

The accelerated expansion in the Nation's potential productive capacity can be responded to in a number of ways, and it may be helpful to examine some of them.

One level of choice involved in achieving a high and rising level of economic activity is the selection of emphasis among the major sectors of the

---

[11] Manpower Report of the President, March 1965, pp. 46-47.

national economy. As shown in Table 5 below, the choice of sector emphasis also implies decisions as to (1) whether the economy will become more or less oriented to private versus public needs and desires, (2) whether the major national concern is with the acceleration of the rise in the standard of living or with the enhancement of the Nation's productive capacity, and hence (3) whether the main thrust of the economic policies are of a relatively short-run or long-run nature.

Table 5

ALTERNATIVE SECTOR EMPHASIS IN ACHIEVING ECONOMIC GROWTH

	Illustrative Factors to be Considered		
Sector	Private or Public Orientation	Standard of Living or Productive Capacity	Effect
Consumer Spending[a]	Private	Living Standard	Short-term
Business Investment[b]	Private	Productive Capacity	Long-term
Government Purchases	Public	Mixed	Mixed

[a]Some government programs, of course, have important direct effects on consumer spending, such as transfer payments which directly bolster consumer purchasing power.

[b]Some government programs have important effects on the volume and composition of business investment, such as tax incentives to expand acquisition of new producer durable equipment.

Certainly, the factors shown in Table 5 are merely illustrative of the fact that a decision in one sphere of economic policy almost inevitably has repercussions in other areas. None of the materials presented here are intended to recommend one possible course of action over another. Rather, the purpose is to help those who will determine or influence economic policy by presenting more formally some of the many factors that may need to be considered.

A limitation to be borne in mind is that any tabulation of this sort, by necessity, does not reveal the often subtle and indirect nature of economic relationships. For example, those government purchases of goods and services which mainly involve the "purchase" of the services of government employees are far more public-sector oriented than are government purchases of standard products, whose price is determined in private markets. There is, indeed, a spectrum of possibilities here. In the case of the defense and space programs the public-sector orientation is pervasive; the private manufacturers often utilize government-supplied fixed and working capital, producing commodities whose characteristics are determined in advance by the government, under conditions often specified in government procurement contracts, and at profit rates subject to subsequent governmental revision.

In other cases, such as in agriculture and mining the Federal Government can strongly influence the prices of many commodities through its position as a dominant customer. It can also affect the labor costs of business firms by setting wage and other working standards in its contracts and through its position as a major employer of many types of skills.[12]

Many government purchases, however, do not influence the private sector so strongly. Procurement of conventional office equipment and medical supplies provide common cases in point.

Policy Reactions to Rising Supply of Potential Workers

Another type of future economic choice involves the Nation's policy reaction to the growing potential productive capacity, particularly as indicated by the rising labor force age group. As pointed out earlier, the labor force is

---

[12] Cf. U.S. Congress, Joint Economic Committee, The Relationship of Prices to Economic Stability and Growth, Compendium of Papers, March 31, 1958, pp. 529-554; M.L. Weidenbaum, "The Defense-Space Complex: Impact on Whom?", Challenge, April 1965.

projected to grow at a much faster rate during the coming decade than in recent years; the numbers of those in the 18-24 age group, whose unemployment rates have been much above average, are anticipated to increase at double the national average. Decisions as to the most desirable methods of responding to the increased potential supply of workers involve also considerations of the different effects each of the approaches would have on other important aspects of the American economy. Again, the effects shown below in Table 6 are meant to be illustrative and do not exhaust the possibilities.

Table 6

ADJUSTMENTS TO RISING LABOR FORCE AGE GROUP

Nature of Adjustment	Types of Other Effects: On Output	On Leisure	On Productivity	On Prices	On International Competitiveness
INCREASE EMPLOYMENT VIA:					
Economic growth	Expansion	Neutral	Mixed	Increase Pressures	Mixed
Reduced standard work week	Reduction	Expansion	Mixed	Mixed	Increase Pressures
More paid holidays, vacations, and sabbaticals	Reduction	Expansion	Mixed	Increase Pressures	Increase Pressures
Lower minimum wage law for new entrants	Mixed	Reduction	Mixed	Reduce Pressures	Reduce Pressures
REDUCE PARTICIPATION RATES:					
More schooling and training	Long and short-term differences	Short-term Expansion	Long-term Expansion	Mixed	Reduce Pressures
More retirement programs	Reduction	Expansion	Neutral	Reduce Pressures	Mixed
RISING UNEMPLOYMENT	Reduction	Expansion	Mixed	Reduce Pressures	Mixed

As can be seen, although each of the seven approaches listed in Table 2 would represent an adjustment to the rising availability of persons of working age, almost every one of them would influence differently the total output of the economy, or the amount of leisure time available, or the productivity of the economy, or the price level, or the competitiveness of this Nation's industries in world markets. Many of these approaches are not mutually exclusive and the effects of some may be additive. Also, the time horizons may differ. For example, education and training would tend to raise future productivity and output at the expense of current output. Furthermore, the subsequent reactions to any of the alternative adjustments would influence the effects of utilizing that approach; should employers be able to absorb the added costs of longer vacations without raising prices, the inflationary pressures would be less than if the added costs were passed on to consumers.

In many cases, the choice of emphasis among these approaches may not be determined primarily on economic grounds, but from social or political viewpoints. For example, decisions to lower the retirement age for social insurance programs would reduce the participation rate of the labor force age group; however, such determination as to the minimum age at which covered workers can retire and receive benefits--although it has important economic repercussions--is essentially a political decision as to desirable social norms. Similarly, a reduction in the standard work week (which could be encouraged through amending existing federal legislation governing the payment of overtime) would represent a social choice as to the relative importance of leisure.

Clearly, at least one of the possible adjustments to the rising potential supply of workers would be negative or passive -- merely to accept a rising trend of unemployment in the American economy.

Price Level Implications

A perennial source of concern in considering public policy for a rapid rate of economic growth is the resultant pressure on prices. This may be an important example of the need to balance off various objectives. At one extreme, a sufficiently low utilization of the Nation's resources -- as indicated by extremely high unemployment rates and large amounts of excess industrial capacity -- could eliminate inflationary pressures in the United States. Conversely, totally ignoring aggregate price level considerations might temporarily help to achieve virtually full employment; however, major problems of balance of payments disequilibrium likely would arise as well as pressures from specific groups of the population which would not be greatly benefitted by full employment, but would be hurt by the inflation. Retired persons and others living on fixed incomes are obvious examples of the latter category.

American history provides some interesting examples of rapid rates of economic growth accompanied by falling aggregate price levels.[13] Shifts in demand from relatively inefficient to more efficient sectors of production (from agriculture to industry during the 19th century) may provide some part of the explanation.

John Maurice Clark pointed out that the relationship between the price level and economic expansion is not a simple one.[14] He maintained that it is inherently probable that a demand-induced inflation is more favorable to expansion than one pushed up from the cost-price side, and that a spontaneously

---

[13]National Bureau of Economic Research, Trends in the American Economy During the Nineteenth Century, Princeton, Princeton University Press, 1950; U.S. Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1957, Washington, D.C., 1960.

[14]John Maurice Clark, The Wage-Price Problem, New York, American Bankers Association, 1960, pp. 16-17.

stable price level may be more favorable to growth than creeping inflation. Clark also stated that a mild inflation is a more stimulative condition than one marked by such drastic restrictions as would be necessary to stamp it out.

There is no universally accepted trade-off between avoiding inflation and achieving an acceptable rate of economic growth and thus a high level of employment.[15] To many persons, a four percent unemployment rate is considered to be close to the maximum rate of labor utilization which can be achieved without such strain on the Nation's resources as to create severe inflationary pressures. However, it needs to be acknowledged that some observers think that a lower rate of unemployment, somewhere in the vicinity of three percent, would be a more desirable target either because they believe that inflationary pressures can be contained, or that some price level increases are an acceptable "price" to pay for reducing unemployment.

Conversely, some persons contend that serious inflationary pressures arise prior to the Nation reducing unemployment to four percent. One school of thought maintains that "structural" deficiencies in the economy are the obstacles; education, retraining, and other programs designed to enhance labor skills and promote labor mobility are considered necessary in this case.

It should be noted that the rates of aggregate price increase assumed in the economic projections presented earlier are lower than those which have accompanied similarly rapid periods of economic growth in recent years -- in the absence of the direct controls which have been imposed during wartime periods.

Studies by George Perry tend to indicate that, at rates of productivity increase and profits experienced by the American economy during the period

---

[15] Cf. Paul A. Samuelson and Robert M. Solow, "Analytical Aspects of Anti-Inflation Policy," American Economic Review, May 1960, pp. 177-194; A.W. Phillips, "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957," Economica, November 1958, pp. 283-299.

since World War II, price increases above those assumed here would accompany the reduction of unemployment to 3 percent.[16] However, since completing his research, Perry has stated that, "...recent wage increases [and hence price increases] have been more modest than one could have predicted from past experience with any of the equations estimated here, or almost certainly with any equation of this general type.[17]

During the past year, the increase in the generally used measures of the aggregate price level has been more rapid than can be inferred from Perry's remarks. A number of factors may help to explain the differences.

For example, a part of the current rapid rise in the price level is due to relatively temporary special conditions relating to form products rather than to demand-pull market conditions. Also, a substantial portion of the price rise is resulting from the sharp acceleration in defense procurement -- defense contracts and other "obligations" were one-third higher in the fiscal year 1966 compared to the previous year. The abrupt and substantial shift in resources which this action requires gives rise to wage and other cost increases which would not be present in the period of stable growth envisioned in these projections.

Perhaps more fundamentally, the massive education, training, and retraining programs which have been accelerated as a part of the "war against poverty" are likely to make possible higher labor utilization rates than in the past without generating substantial inflationary pressures.

There are numerous either practiced or suggested methods for dealing with inflationary questions. These include indirect government actions (fiscal and

---

[16]George Perry, "The Determinants of Wage Rate Changes and the Inflation-Unemployment Trade-Off for the United States," Review of Economic Studies, October 1964 and Unemployment, Money Wage Rates and Inflation, MIT Press, 1966.

[17]Perry, op.cit., p. VII.

monetary policies), direct wage and/or price controls, and appeals to the enlightened self-interest of labor and management alike. An important example of the latter course may be Presidential requests to key industries (such as steel or aluminum) to modify wage and/or price decisions to accord with the public interest. It appears that public attitudes and policies in this area are still developing and have not been firmly agreed upon. Experiences in 1966 seem to indicate that voluntary compliance with wage-price guidelines is more readily secured during a period of price stability than during times of substantial inflation.

Perhaps one of the obstacles to a clear national attitude toward inflation is the differential effects on various groups of the population, indeed the same individual may be affected differently in his various roles as worker, consumer and investor. For example, as shown in Table 7, an individual -- in his role as a consumer -- may be hurt by inflation as he sees the purchasing power of his money reduced. However, the same individual -- as an employee -- may find that he is benefitted, or at least not hurt, by inflation as his wage payment and increase at the same rate, or faster, than the aggregate price level. Simultaneously, as an investor he might be hurt or benefitted by a general rise in the price level, depending on whether he has fixed or fluctuating value investments.

The same ambivalence may exist in the Government, where Treasury officials see tax receipts rise with price level expansion, while procurement officers find the purchasing power of their appropriated funds diminished.

Similarly, the impact of inflation on business firms is subject to a very wide variance, both among and within individual companies. For example, the marketing departments of insurance companies maybe quite concerned with the adverse effects of inflation on potential buyers of insurance; however, the

Table 7

SOME IMPACTS OF INFLATION

	Possible Beneficiaries	Possible Sufferers
Consumers		X
Employees:		
Fixed earings (e.g. government workers)		X
Negotiated earnings	X	
Retired workers		X
Business		
Capital - intensive industries		X
Labor - intensive industries	X	
Government		
Treasury	X	
Procurement agencies		X
Investors:		
Bonds, life insurance, and other fixed-value investments		X
Stocks, land and other fluctuating-value investments	X	

investment departments may find distinct benefit via higher returns on their investments and a greater spread between the resulting income and the proceeds required to meet the commitments of policyholders. Capital-intensive industries might tend to experience real capital losses, to the extent that depreciation allowances computed at historical costs do not adequately finance replacement at substantially higher price levels. More labor-intensive industries would be in a more favorable position especially to the extent they could pass on labor cost increases in relatively price-inelastic product markets.

Encouraging Manpower Training

As mentioned earlier, it has been suggested that unemployment might be further reduced, without generating substantial inflationary pressures, through programs of manpower training and retraining. Again, there is no single simple way of ensuring that the requisite labor force will be trained in the proper skills at the needed time. However, there is a wide array of public policies that could encourage such training. As shown in Table 8, these involve varying degrees of public sector and private sector participation.

Table 8

METHODS OF ENCOURAGING ADDITIONAL MANPOWER TRAINING

Governmental Operation of Training Facilities

1. Direct Federal operation of training facilities
2. Grants to states and local governments for their training program

Incentives to the Private Sector

3. Expenditure subsidies for private industry training programs
4. Tax incentives for private industry training programs
5. Federal assistance to schools and other non-profit institutions for specialized training
6. Changes in regulatory programs (e.g. minimum wage legislation) to encourage on-the-job training

None of the six approaches in Table 8 is recommended as the optimum method of providing additional manpower training. Indeed, each of them opens up one or more additional questions of public policy. Governmental operation of training facilities may provide the most direct way of focusing on the specific manpower areas of greatest need. However, some will object to further extension of the public sector into this area of activity.

Another illustration that the selection of economic policies may be difficult is contained in the illustrative alternatives shown for offering incentives to the private sector. For example, although tax incentives may

provide an effective means of encouraging private industry, this approach may run counter to the desire to keep special-benefit provisions out of the tax system because of the concern for tax simplification and "equal treatment of equals." Certainly, suggestions to permit even temporary reductions in the statutory minimum wage encounter serious opposition on the part of those concerned with maintaining minimum income standards.

Alternative Wage Policies

One currently-applied standard for assessing wage policies is the wage-price guidelines of the President's Council of Economic Advisers. In general, these guidelines are intended to limit wage increases to the trend growth of productivity in the national economy (with specified variations); hopefully, the application of this standard would not result in generating any additional inflationary pressures. On the basis of the most recent experience, it would appear that these guidelines are more effective in dealing with potential cost-push inflationary pressures than in a general demand-pull inflationary situation as has accompanied at least the initial phase of the Vietnam defense buildup.

John Maurice Clark, who suggested in 1960 that inflation could be avoided by limiting wage increases to the economy-wide rate of increase in productivity, also pointed out that such an outcome requires: (a) restraint in organized labor's use of its market power, either voluntarily or enforced by employers' stiff resistance and (b) ready downward flexibility of prices where the state of costs and profits permits.[18]

Were the general trend of wage rates in the economy to rise at a faster rate than productivity, it is likely that some inflationary pressures might result. However, to some observers this might be acceptable if the pattern of wage increases encourages more persons to enter the labor force, and thus, to

---

[18]Clark, op.cit., pp. 38-39.

raise potential economic output. To some extent, such wage and resultant price increases would effectuate an intergeneration distribution of wage costs and incomes. Retired persons receiving income from pension funds would find the purchasing power of their annuities reduced and, hence, find that they are in effect self-financing more of their retirement-age expenditures than they had intended to bargain for.

To the extent that there are differentials between wage and price changes in different branches of the economy (e.g. higher and offsetting productivity growth in goods as compared to services), those elements of the population purchasing a higher than average amount of services -- again the relatively older particularly in the case of medical services -- may find themselves more adversely affected than would be indicated by the aggregate price increases.

Alternate Tax and Fiscal Policies

On account of the overall progressive tax structure, Federal revenues in the coming decade are likely to be rising faster than the GNP. According to several recent studies, such revenues are also likely to be rising more rapidly than the "normal" or trend increase in Federal expenditures.[19] However, the recent acceleration of military costs occasioned by events in Vietnam has resulted in an acceleration in Federal spending which, at least temporarily, eliminates the potential Federal surpluses envisioned in these earlier studies.

When improvements in the international environment permit the reduction of U.S. military outlays, it is likely that the Nation would face once again the large and growing full employment budget surpluses which result in the now

---

[19] Cf. Joseph A. Pechman, "Financing State and Local Government," in American Bankers Association, Proceedings of a Symposium on Federal Taxation, 1965, pp. 71-84; Selma J. Mushkin and Robert F. Adams, "Emerging Patterns of Federalism," National Tax Journal, September 1966, pp. 225-247.

familiar problem of "fiscal drag." Under those conditions, actions would need to be considered to reduce the overall effective Federal tax rate as necessary (or to increase expenditures further).

The major problem of economic planning involved here would be to identify initial policies which would be sufficiently prompt and effective to prevent serious unemployment and excess industrial capacity from developing; such negative influences, if unchecked, could accelerate into a major recession. There is a wide range of fiscal and monetary policies which have the necessary stimulating impact on aggregate demand, but different effects on the composition of output and on the distribution of income among the different groups in American society.

In such "contingency" planning, the balance struck between tax reduction and increased Government spending would be influenced by the inferences as to the relative importance to be accorded to the private sector versus the public sector -- to private demand for such goods and services as food, clothing, housing, and recreation, as against public demand for roads, space exploration, public health, and social services.[20]

At the present time, the type of fiscal policy decisions that face economic policymakers appear to be quite conventional, involving restraint on civilian expenditures and otherwise dampening any latent inflationary pressures resulting from the military buildup. Assuming successful resolution of the Vietnam situation in the near future, the type of longer-run fiscal policy decisions that would be facing the Nation appear to be more pleasant ones. These may involve primarily choices among alternative methods of tax reform and reduction.

---

[20] Cf. U.S. Congress, Joint Economic Committee, Twentieth Anniversary of the Employment Act of 1946: An Economic Symposium, Invited Comments on Directions for the Future, 1966, pp. 188-189.

Tax reductions, under those conditions of stable or declining defense spending, could both assist in achieving a full employment economy and also be possible because of a rapidly rising level of GNP.

At the margin, of course, the choice may be somewhat more difficult, involving balancing the desirability of providing additional government services against the benefits of a larger private sector of the economy. Table 9 indicates some of the possible alternative methods of tax reduction. Possible expenditure increases are dealt with subsequently.

Table 9 also lists a few of the many factors that would need to be taken into account in selecting among possible tax changes. In good measure, the evaluation may be a question as to which are the dominant purposes of the tax action. Clearly, an increase in personal exemptions -- which benefit the lower brackets more than proportionately -- would tend to act as an income equalizer by reducing after-tax income inequality; a reduction in estate and gift taxes -- which are borne primarily by the highest income groups -- would have the reverse effect.

In contrast, a choice between excise reductions and cuts in the corporate income tax would involve judgments as to the extent that either of these taxes are shifted and of the ultimate incidence, technical questions which are still being debated in the public finance literature. An example of a more widely controversial question would be the relative emphasis on low-bracket individual income tax reductions versus high bracket and corporate tax reductions in an effort to increase the level of national output. Some contend that increasing the investment funds available to the high-saving individuals and corporations would be more effective in fostering economic growth; others, of course, contend that bolstering the purchasing power of consumers, particularly those in the low income groups who spend virtually all of their available income, would

provide the needed demand to generate rising employment and economic growth. This may also represent the type of issue that is never completely settled, but is continually present in determining the proper degree of emphasis between one or another at any given point in time.

Table 9

CHOICES AMONG ALTERNATIVE TAX POLICIES

Possible Tax Changes	Some Factors to be Considered
Across-the-board changes in rates	Effects on equity among taxpayers
Corporate taxes:	Effects on income distribution
Depreciation practices	Effects on GNP growth rate
Investment credits	Effects on allocation between consumption and investment
Basic rates	Effect on built-in stabilizers
Individual taxes:	Effect on relative emphasis between saving and investment
Emphasizing upper brackets	
Emphasizing lower brackets	
Exemptions	
Deductions	
Capital gains treatment	
Pension trusts	
Excises:	
General	
Selective	
Estate and gift taxes	
User charges	

The Changing Composition of Federal Expenditures

This report, as do most others dealing with future trends in the American economy, shows very substantial increases in government expenditures. Projections of defense spending are notoriously unreliable. Should the current rise in military outlays continue longer than anticipated, or accelerate, decisions would be necessary as to whether these additional requirements should be at the expense of foregoing some tax reduction or some projected civilian government expenditure increases.

Under the assumptions underlying this report, very substantial increases are projected in civilian government spending programs. Numerous program choices are involved in these projected levels of government spending. The recent introduction of a planning-programming-budgeting system in the Federal Government is high-lighting the types of choices that can be made, but hardly simplifies the process of allocating public resources among numerous competing ends.

Table 10 is an attempt to illustrate, in perhaps the simplest form, how proposed new or expanded Federal expenditure programs can be related to the broad and basic functions of purposes of government.[21]

Table 10

SOME POSSIBLE FEDERAL EXPENDITURE INCREASES

Possible Increases	Defense	Welfare	Economic Development	Other
Second Panama Canel	Primary		Secondary	
Supersonic Transport	Secondary		Primary	
Social Security Liberalization		Primary		
Planetary Exploration	Primary			Secondary
Operational Desalinization			Primary	
Universal Veterans Pensions		Primary		
Large-scale Rural Development Program		Secondary	Primary	
Many Others				

[21] For an attempt at implementing this approach, see M.L. Weidenbaum, "Which Resources for What Goals: Another Look at the Budget," Challenge, July 1964.

The most general level of choice might be of the nature of selecting among (1) developing a supersonic commercial transport aircraft, (2) proceeding with an operational brackish and salt water desalinization effort, or (3) embarking upon a large-scale rural development program, all aimed as promoting the economic development of the United States. So viewed, these -- and other similar programs -- are substitutes for each other in attaining a major national objective. Likewise, liberalizing the benefit paid under the social security program and establishing universal pensions for all veterans over 65 are alternate means of providing supplementary incomes to the Nation's elderly population. The present emphasis in the Executive Branch's Planning-Programming-Budgeting System appears to be on the specific program or department level. However, the eventual application of the choice-among-alternatives approach may alter considerably the overall program emphasis in the Federal Budget, by indicating the relative advantages (in such terms of high ratios of benefits to costs) of one category of government program over another.

Recently, the Joint Economic Committee has attempted to encourage analysis of the various economic effects of individual Federal programs. An example is its "Inquiry Relating to Human Resources Programs" which is attempting to illuminate the following aspects of these programs:

1. Effects on the distribution of personal income.
2. Effects on the productivity and earnings of workers.
3. Effects on business competition, growth, and management.
4. Effects on the stability and level of employment, wages, costs, production, sales, prices, and other phases of economic activity.
5. Variations in the geographic impacts of these programs.
6. Contribution to the growth rate of GNP.[22]

After allocative decisions are made to devote a certain portion of the

---

[22]U.S. Congress, Joint Economic Committee, Subcommittee on Economic Progress, Inquiry Relating to Human Resources Programs, Joint Committee Print, September 1965.

Federal Budget to a given program of function, another type of choice is required -- the selection of the specific governmental mechanism to utilize. In practice, decisions as to the method of conducting a new government program and the general level of funding are made simultaneously. One example of the range of such possible choices is contained in Table 8, Methods of Encouraging Additional Manpower Training.

The Federal Government and the States

A related question is the appropriate level of government at which a given program should be conducted. A number of recent studies have pointed out a possible "fiscal mismatch" between needs and resources. Under non-war conditions, the supply of readily available Federal revenues appears to rise faster than current demands on the Federal purse, but the state-local situation is the reverse; expenditure demands on state and local governments rise faster than readily available revenue supply.

The so-called Heller-Pechman proposal for block grants to the states is one of a family of possible ways in which the superior financial resources of the Federal Government can be utilized to assist the hard-pressed state, county, and city governments. Other methods of utilizing the potential increases in Federal revenues include expanded program or tied grants, tax sharing, individual Federal tax credits for state and local taxes paid, and new direct Federal activities in the various localities.

It may be helpful to examine these alternative ways to deal with the fiscal situation that may become prevalent in the 1970-75 time period.[23] Some of the potential increases in Federal revenue could be devoted to new activities to be

---

[23] Cf. M.L. Weidenbaum, "State Needs and Federal Funds," Business Topics, Winter 1966.

conducted by the Federal Government itself in all 50 states. This approach would call for the largest amount of Federal intervention, since no provision would be made for state or local government participation. There would be state and local benefits to the extent that facilities would be provided which otherwise would have to be financed locally.

This approach, which would require abstaining from reductions in Federal income taxation, would maintain the progressivity of the overall tax structure and the role of the built-in or automatic stabilizers. Depending on the type of expenditure programs selected, the impact on income distribution could be either more or less equalizing.

An alternative would be to expand the use of "tied" or conditional grants to state and local governments for specific functions. This approach would make the Federal Government an even more important influence in state and local fiscal operations. Use of conditional grants would not affect the progressivity or stabilizing effects of the tax structure. Most Federal grant programs have an income equalization effect because Congress often uses allocation formulas based on population or income.

One proposal for block or unconditional grants would set up a permanent trust fund to distribute an amount equal to two percent of the Federal income tax base among the states on a per capita basis. This approach would reduce the role of the Federal Government both in the national economy and in relation to state and local government action. It would also exercise a moderately equalizing effect between high income and low income states, but would not affect the overall progressivity of the tax structure or the importance of the automatic stabilizers. This method might be far from an unmixed blessing for urban areas because Federal funds would be funneled entirely through the state governments. Some methods have been suggested to include local as well as state governments as recipients of the Federal funds.

Alternatively, a portion of Federal revenues could be distributed to the states on the basis of source of collection. This would result in high income states, with high tax payments, receiving the larger shares. The state governments would be left free to determine the allocation of their funds. The effects on overall tax progressivity and stability would be the same as block grants.

Tax credits would provide Federal income taxpayers a more liberal write-off of state and local taxes by giving them an option either to deduct their state and local tax payments from taxable income, as they can do now, or to deduct some portion of state and local tax payments from their Federal tax bills. The major benefits would accrue to persons in the low and middle tax brackets who carry above-average state tax loads. This method could help local, as well as state, governments by softening resistance to increases in state and local taxes.

Outright reductions in Federal taxes would be an indirect way of aiding state and local governments. This would permit them to increase their tax rates without increasing the total tax bill of the average citizen, but introduces questions of interstate rivalry. The overall national tax structure would become less progressive (as well as less anticyclical), because the Nation would be placing greater reliance on frequently proportional and regressive state and local taxes. The role of the Federal Government, both in relation to state and local governments and to overall economic activity would be diminished with a reduction in its fiscal resources.

In a society with plural objectives, no single fiscal approach would satisfactorily meet more than a few of them -- and might adversely affect other goals. Direct Federal expenditures might optimize income stabilization and income redistribution objectives, but bypass both state and local governments. Tax reduction decreases the size of the Federal sector, but meets state and

local public needs only indirectly, if at all. Tax sharing and block grants provide for the allocation of public funds among programs to be made individually by the states, who presumably are more familiar with the needs and desires of their residents than the national government; however, no provision is made for the burgeoning financial requirements of counties, school districts, cities and towns.

The Regional Distribution of Income

Another factor to consider in the allocation of Federal resources is the effect on the geographic distribution of income. As shown in Table 11, some types of Federal programs have a far stronger tendency to act as "income equalizers" among the different regions than others.[24] Specifically, farm price supports and Federal aid to education demonstrate this characteristic to a very strong degree. In contrast, defense and space contract awards tend to be received by those highly industrialized states that also have above-average income levels.

The basic implication that follows from the data in Table 11 is that expansion in Great Society and other domestic civilian programs results in shifts in the geographic distribution of Federal expenditures in favor of greater equality in the regional distribution of income.

Public and Private Investment

Projected profits and cash flow would appear to be high enough to finance the rising level of business investment contained in the projections. Bert Hickman has attempted to show that the American economy has experienced a

---

[24]The data are taken from M.L. Weidenbaum, Shifting the Composition of Government Spending: Implications for the Regional Distribution of Income, a paper presented to the Annual Meeting of the Regional Science Association, November 14, 1965.

Table 11

REGIONAL SHARES OF POPULATION, INCOME, AND SELECTED FEDERAL EXPENDITURE PROGRAMS, 1963
(Percentage Distributions)

Region	Population	Personal Income	Defense	Composite Non Defense	NASA	Reclamation	Highways	Veterans	Public Assistance	Corps of Engineers	Education**	Farm Subsidies
Low Income	29.7	22.9	17.8	36.2	21.8	22.4	31.1	32.8	37.1	38.7	45.1	52.9
Southeast	21.7	16.1	11.2	24.6	18.8	--	21.8	23.9	26.2	21.4	34.6	30.9
Southwest	8.0	6.8	6.6	11.6	3.0	22.4	9.3	8.9	10.9	17.3	10.5	22.0
Average Income	36.3	37.7	32.1	33.9	15.8	48.2	39.9	35.4	31.9	28.6	28.0	42.5
Rocky Mountain	2.4	2.3	4.2	3.2	0.4	35.4	5.8	2.5	2.8	0.3	1.8	1.6
Plains	8.3	7.9	6.3	13.8	9.6	12.8	9.5	8.9	8.7	21.1	8.9	31.7
Great Lakes	19.8	21.0	12.6	13.0	3.3	--	19.6	17.2	14.5	5.8	14.2	9.2
New England	5.8	6.5	9.0	3.9	2.5	--	5.0	6.8	5.9	1.4	3.1	*
High Income	34.0	39.4	50.1	29.9	62.4	29.4	29.0	31.8	31.0	32.7	26.9	4.6
Mideast	21.4	24.6	22.0	12.9	11.8	--	15.1	20.1	15.9	10.1	17.6	0.3
Far West	12.6	14.8	28.1	17.0	50.6	29.4	13.9	11.7	15.1	22.6	9.3	4.3

* Less than .005 percent

**Program for fiscal year 1966

declining capital/output ratio over time.[25] In a sense, this may point up the need for accelerated investment in human resources. Theodore Schultz and others have shown that so-called investment in human beings -- in such forms as education and training -- has been expanding more rapidly than investment in physical capital.[26]

It may well be that the overall capital/output ratio (where capital is defined to include both physical and nonphysical investments) has been relatively constant in recent years. This implies, over the coming decade, choices between increased stimulus to business investment or continued acceleration in outlays for education and training and other nonphysical capital investments, in order to meet the economic capacity increases projected here.

Also, recent efforts by the National Aeronautics and Space Administration and the Department of Commerce to accelerate the transfer of defense and space technology to civilian uses may stimulate additional investment for new products. Certainly, the reservoir of commercially exploitable technology is likely to increase during the remainder of the decade. New technical developments may spur businessmen to replace older equipment more rapidly and to purchase equipment capable of producing entirely new products. On the other hand, some innovations may make capital equipment more efficient and thus reduce the amount of investment needed to create any given amount of capacity. The net balance of these offsetting tendencies is hardly clear.

---

[25]Bert G. Hickman, Investment Demand and U.S. Economic Growth, Washington, D.C., Brookings Institution, 1965, p. 15. My colleague, Hyman Minsky, has pointed out to me that the continued high level of final demand implies reduced uncertainty for the businessman and thus may lower the threshhold for considering new investment projects.

[26]Theodore W. Schultz, "Investment in Human Capital," American Economic Review, March 1961.

Promoting Consumer Spending and Living Standards

Expansions in social security, private pensions, disability and unemployment insurance, hospital insurance, and medicare may all act to maintain, if not reduce, the consumer's propensity to save on his own account.

It should be recognized that there will likely be strong forces in the remainder of the 1960's which could tend to shift the saving rate toward a lower level. The high birth rates of World War II and early postwar years will be reflected in higher rates of new family formation. These individuals will be in the stage of life when automobiles, household furnishings, and other durable goods typically are acquired for the first time.

Hence, public attention may at some point in the decade need to be focused on the desirability of encouraging private saving to promote private-oriented investment, risk-bearing, and entrepreneurship.

A Cautionary Note

The ability to make "accurate" projections of economic events a decade in advance surely is limited; to the extent that projections encourage policy-makers to take steps to prevent the projected situation from occurring, they may be self-defeating rather than self-fulfilling, but perhaps intentionally so. In contrast, the need to improve the statistical reporting systems and the tools and concepts used in analyzing the data remains very great. Hence, the continuing requirement will be present to review at frequent intervals both the assumptions underlying these and other projections and the changing economic developments occurring subsequent to the issuance of the estimates. Certainly, the great need for judgment in translating economic statistics into workable economic policies should not be underestimated.

Appendix A

COMPARISON OF THE COMMERCE DEPARTMENT AND NPA PROJECTIONS

This appendix compares the highlights of the Commerce Department projections (contained in Part II) with those of the National Planning Association. The "Judgment" Model of the NPA projections were used.

The full report of the NPA projections is contained in National Economic Projections to 1976/77, National Economic Projection Series -- Report No. 66-N-1, Center for Economic Projections, National Planning Association, September 1966.

The NPA projection of potential GNP in 1970 is approximately one percent higher than the Commerce estimate, in terms of constant 1958 dollars. The difference widens over time, with the NPA estimate of GNP in 1975 slightly over 2 percent higher than the Commerce figure. In general the NPA projections show higher levels of consumer expenditures and private investment over the coming decade. The Commerce Department estimates slightly higher levels of net exports and of government purchases (the latter only in 1970), but these do not offset the larger NPA figures for the private domestic sectors.

Table No.	Title
A1	Comparison of Labor Force and Employment Estimates
A2	Comparison of GNP Supply Estimates
A3	Alternate Compositions of Gross National Product, billions of 1958 dollars
A4	Alternate Compositions of Gross National Product, billions of current dollars
A5	Alternate Projections of Government Receipts and Expenditures

Note: Kenneth Galchus was responsible for the preparation of the Appendix Tables.

Table A1

COMPARISON OF LABOR FORCE AND EMPLOYMENT ESTIMATES

	1970			1975		
	Commerce	NPA[1] Judgment Model	Difference	Commerce	NPA Judgment Model	Difference
Total Labor Force (millions)	86.4	86.2	.2	93.6	93.9	- .3
Armed Forces (millions)	2.7	2.8	- .1	2.6	2.8[1]	- .2
Civilian Labor Force (millions)	83.7	83.4	.3	91.0	91.1	- .1
Rate of Unemployment (percent)	4.0	4.1	- .1	4.0	4.0	0
Civilian Employment (millions)	80.0	80.0	0	87.4	87.5	- .1

[1] Interpolated from NPA trend projections for 1972 and 1976.

Table A2

COMPARISON OF GNP SUPPLY ESTIMATES

	1970			1975		
	Commerce	NPA Judgment Model	Difference	Commerce	NPA Judgment Model	Difference
Total Employment (in millions)	82.7	82.8	- .1	90.0	90.3	- .3
Hours Worked per Week	38.2	37.9[1]	.3	37.7	37.2	.5
Output per Man-Hour	$4.63	$4.71	-.08¢	$5.24	$5.43	-.19¢
Potential GNP (Billions of 1958 Dollars)	760.0	767.7[1]	-7.7	925.0	947.8	-22.8

[1] Interpolated from NPA trend projections

Table A3

ALTERNATE COMPOSITIONS OF GROSS NATIONAL PRODUCT
Billions of 1958 Dollars

	1970			1975		
	Commerce	NPA[1] Judgment Model	Difference	Commerce	NPA Judgment Model	Difference
Gross National Product	760.0	767.7	-7.7	925.0	947.8	-22.8
Personal Consumption Expenditures	498.3	504.1	-5.8	606.0	622.7	-16.7
Durable Goods	88.0	85.0	3.0	114.5	110.8	3.7
Nondurable Goods	211.5	215.4	-3.9	243.0	250.3	- 7.3
Services	198.8	203.7	-4.9	248.5	261.6	-13.1
Gross Private Domestic Investment	115.5	121.2	-5.7	143.6	151.9	- 8.3
Nonresidential Fixed Investment	74.5	83.5	-9.0	87.9	103.8	-15.9
Residential Structures	34.2	31.2	3.0	46.5	41.3	5.2
Change in Inventories	6.8	6.5	.3	9.2	6.8	2.4
Net Exports of Goods and Services	8.0	7.0	1.0	9.9	7.7	2.2
Exports	48.5	48.9	- .4	61.9	61.3	.6
Imports	40.5	41.9	-1.4	52.0	53.6	- 1.6
Gov't Purchases of Goods and Services	138.2	135.4	2.8	165.5	165.5	0
Federal	60.0	61.1	-1.1	64.5	66.7	- 2.2
State and Local	78.2	74.3	3.9	101.0	98.8	2.2

[1]Interpolated from NPA trend projections

Table A4

ALTERNATE COMPOSITIONS OF GROSS NATIONAL PRODUCT
Billions of Current Dollars

	1970			1975		
	Commerce	NPA Judgment Model	Difference	Commerce	NPA Judgment Model	Difference
Gross National Produce	920.0	936.7	-16.7	1205.0	1268.6	-63.6
Personal Consumption Expenditures	583.4	589.7	- 6.3	753.9	782.5	-28.6
Durable Goods	87.5	87.2	.3	113.5	118.1	- 4.6
Nondurable Goods	241.5	240.5	1.0	292.9	291.3	1.6
Services	254.4	262.0	- 7.6	347.5	373.1	-25.6
Gross Private Domestic Investment	137.5	147.1	- 9.6	183.5	204.4	-20.9
Nonresidential fixed investment	85.0	99.8	-14.8	105.5	137.6	-32.1
Residential Structures	44.3	40.1	4.2	66.0	58.8	7.2
Change in inventories	8.2	7.2	1.0	12.0	8.0	4.0
Net Exports of Goods and Services	9.3	9.5	- .2	12.1	12.0	.1
Exports	51.0	53.1	- 2.1	66.2	69.2	- 3.0
Imports	41.7	43.6	- 1.9	54.1	57.2	- 3.1
Gov't Purchases of Goods and Services	189.8	190.4	- .6	255.5	269.7	-14.2
Federal	78.5	80.1	- 1.6	93.1	98.9	- 5.8
State and Local	111.3	110.3	1.0	162.4	170.8	- 8.4

[1]Interpolated from NPA trend projections

Table A5

ALTERNATE PROJECTIONS OF GOVERNMENT RECEIPTS AND EXPENDITURES
(Billions of Current Dollars)

	1970			1975		
	Commerce	NPA[1] Judgment Model	Difference	Commerce	NPA[1] Judgment Model	Difference
FEDERAL GOVERNMENT						
Receipts	175.1	163.7	11.4	237.4	220.4	17.0
Personal tax and nontax receipts	77.3	75.9	1.4	111.0	104.0	7.0
Corporate profits tax accruals	38.7	34.0	4.7	47.3	43.6	3.7
Indirect business tax and nontax accruals	17.2	17.4	- .2	22.2	19.9	2.3
Contributions for social insurance	41.9	36.4	5.5	56.9	52.9	4.0
Expenditures	170.9	163.5	7.4	224.4	221.6	2.8
Purchases of goods and services	78.5	80.1	- 1.6	93.1	98.9	- 5.8
National defense						
Other						
Transfer payments	54.6	48.3	6.3	75.4	70.9	4.5
To persons	52.2	45.9	6.3	72.8	68.5	4.3
To foreigners (net)	2.4	2.4	0	2.6	2.4	.2
Grants-in-aid to State and local governments	21.7	20.1	1.6	37.7	34.4	3.3
Net interest paid	11.1	9.6	1.5	12.6	11.5	1.1
Subsidies less current surplus of government enterprises	5.0	5.3	- .3	5.6	5.9	- .3
Federal surplus or deficit (-), national income and product accounts	4.2	.2	4.0	13.0	- 1.2	14.2

Table A5 Cont'd

STATE AND LOCAL GOVERNMENT	1970 Commerce	1970 NPA[1] Judgment Model	1970 Difference	1975 Commerce	1975 NPA[1] Judgment Model	1975 Difference
Receipts	115.2	114.5	.7	168.6	177.1	-8.5
Personal tax and nontax receipts	20.0	22.2	-2.2	32.3	32.7	- .4
Corporate profits tax accruals	2.8	3.1	- .3	3.5	5.1	-1.6
Indirect business tax and nontax accruals	64.2	61.3	2.9	86.0	91.9	-5.9
Contributions for social insurance	6.5	7.7	-1.2	9.1	13.0	-3.9
Federal grants-in-aid	21.7	20.2	1.5	37.7	34.4	3.3
Expenditures	116.4	116.2	.2	168.3	176.8	-8.5
Purchases of goods and services	111.3	110.3	1.0	162.4	170.8	-8.4
Transfer payments to persons	8.7	9.6	- .9	10.5	12.5	-2.0
Net interest paid	0.6	1.9	-1.3	0.6	3.3	-2.7
Less: Current surplus of government enterprises	4.2	5.6	-1.4	5.2	9.7	-4.5
State and local surplus or deficit (-), national income and product accounts	- 1.2	- 1.7	.5	0.3	0.3	0
Combined Federal, State, and local surplus or deficit (-), national income and product accounts	+ 3.0	- 1.5	+4.5	+ 13.3	- 1.9	+15.2

[1]Interpolated from NPA trend projections